

IN THE CLAIMS:

Claims 3, 8-11, and 19 were previously canceled. Claims 1, 4, and 21-24 are amended. Claims 2, 7, and 20 are canceled. New claims 25-26 are added. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of the Claims:

1. (Currently amended) A composition containing human TGF α "hTGF α ", wherein said hTGF α comprises the amino acid sequence of SEQ ID NO 2 or its combination with other EGF R ligands, coupled with a carrier protein by genetic cloning before expression of said proteins or by chemical conjugation after expression of said proteins, wherein said composition contains an adjuvant, wherein said composition is able to produce a specific immune response in a subject against said hTGF α , and wherein said carrier protein is P64k comprising:

a recombinant fusion protein between human transforming growth factor α (hTGF α) and P64k;

human epidermal growth factor (hEGF); and

an adjuvant;

wherein said composition is able to produce a specific immune response in a subject against hTGF α and hEGF.

2. and 3. (Canceled).

4. (Currently amended) The composition according to claim 1, that contains a recombinant fusion protein between hTGF α and P64k wherein a nucleic acid sequence encoding said fusion protein is cloned in an expression vector system and expressed in mammalian cells, bacteria, or yeast.

5. (Previously presented) The composition according to claim 4, wherein the nucleic acid sequence encoding said fusion protein is cloned in an expression vector of bacteria and expressed in *E. coli*.

6. (Previously presented) The composition according to claim 4, wherein the nucleic acid sequence encoding said fusion protein is cloned in an expression vector of bacteria that presents a genetic sequence coding for six histidines in the N-terminal end of P64k and is expressed in *E. coli*.

7. through 11. (Canceled).

12. (Previously presented) The composition according to claim 1, wherein the adjuvant is incomplete adjuvant of Freund.

13. (Previously presented) The composition according to claim 1, wherein the adjuvant is $\text{Al}(\text{OH})_3$.

14. (Withdrawn) A method of immunization comprising administering the composition according to claim 1 to the subject so as to achieve specific antibodies against hTGF α .

15. (Withdrawn) The method according to claim 14, wherein anti-hTGF α antibodies are generated, which anti-hTGF α antibodies are capable of inhibiting binding of TGF α to its receptor in vitro.

16. (Withdrawn) The method according to claim 14, further comprising generating anti-hEGF antibodies.

17. (Withdrawn) The method according to claim 14, wherein anti-hTGF α antibodies are generated, which anti-hTGF α antibodies are able to recognize TGF α in human tumor biopsies.

18. (Withdrawn) A method of treating a malignant disease expressing hTGF α and other ligands of EGF-R selected from the group consisting of epidermoide breast carcinomas, prostate cancers, gastric cancers, and ovary epithelial cancer in a subject, comprising administering the composition of claim 1 to the subject.

19. and 20. (Canceled).

21. (Currently amended) The composition according to claim [[20]] 1, wherein the concentration of hTGF α and hEGF is between about 5 μ g to 1000 μ g per dose.

22. (Currently amended) ~~The A composition according to claim 21, comprising:~~
a recombinant fusion protein between human transforming growth factor α (hTGF α) and P64k;
human epidermal growth factor (hEGF); and
an adjuvant;
wherein said composition is able to produce a specific immune response in a subject against hTGF α and hEGF, and wherein the concentration of hTGF α and hEGF is 50 μ g per dose.

23. (Currently amended) The composition according to claim [[20]] 1, wherein the ratio of the adjuvant to the hTGF α is about 3 to 1 by weight.

24. (Currently amended) The composition according to claim [[20]] 1, wherein the ratio of the adjuvant to the hTGF α is about 40 to 1 by weight.

25. (New) The composition according to claim 1, wherein the hEGF is in the form of a fusion protein between hEGF and P64k.

26. (New) A composition for treatment of epithelial cancers responsive to human transforming growth factor α (hTGF α) and/or human epidermal growth factor (hEGF) in a subject, the composition comprising:

a recombinant fusion protein between hTGF α and P64k, wherein hTGF α comprises SEQ ID NO:2;

hEGF; and

an adjuvant;

wherein the composition is able to produce a specific immune response against hTGF α and hEGF in the subject.